

$\log_n^m = a$, $\log_{mn}^{m^r n} = b \rightarrow [b] = ?$ (1)

$a > 0$ $\log_n^m = a \rightarrow m = n^a$

$\log_{n^a}^{(n^a)^r} = \log_{n^a}^{n^{ar}} = \log_{n^a}^{n^a \times n^{a(r-1)}} = \log_{n^a}^{n^a} + \log_{n^a}^{n^{a(r-1)}} = 1 + \log_{n^a}^{n^{a(r-1)}} = b$

$[b] = [1 + \log_{n^a}^{n^{a(r-1)}}] = [1, \dots] = [1]$
 $a > 0 \rightarrow \log_{n^a}^{n^{a(r-1)}} : 1 \text{ سوچه است.}$

الف) $y = \sqrt{\frac{x}{\log_{\frac{1}{r}} x}}$

$\log_{\frac{1}{r}} x \rightarrow x > 0$ $\frac{x}{\log_{\frac{1}{r}} x} \geq 0 \rightarrow x = 0$
 $x = 1$
 $D = (-\infty, 1) \cup (1, +\infty)$
 جواب

$\rightarrow y = \frac{\log_r (x^r - x - r)}{\sqrt{x^r - 1} + 1}$

$x^r - x - r > 0 \rightarrow (x - r) \binom{x+1}{-1} > 0$
 $\sqrt{x^r - 1} + 1 \neq 0$
 $\sqrt{x^r - 1} \neq -1$ (ممنوع برقراره!)

$\Rightarrow D = (-\infty, -1) \cup (r, +\infty)$

$r \log_n^a + \log_a^{\sqrt{n}} = r$ $x = 4$ $a = ?$ (۲)

$r \log_4^a + \log_a^2 = r \rightarrow \frac{r}{r} \log_4^a + \log_a^2 = r \rightarrow \frac{1}{t} + t = r$

$t^r - rt + 1 = 0 \rightarrow (t - 1)^r = 0 \rightarrow t = 1 \rightarrow \log_a^2 = 1 \rightarrow a^1 = 2 \Rightarrow a = 2$

$$\left(\log^{\frac{1}{\mu}}\right) n^r + (\log 4) n - \log 10 = 0$$

(7)

$$(\log 4 - \log r^r) n^r + (r \log r) n - (\log 4 + \log r) = 0$$

$$\log 4 = 1 - \log r \rightarrow \log 4 = 0,4$$

(1)

$$0,4 n^r + 0,1 n - 1,1 = 0 \rightarrow r n^r + 1 n - 11 = 0 \quad |\alpha - \beta| = \frac{\sqrt{\Delta}}{|\alpha|} = \frac{\sqrt{4r^2 + 11r}}{r}$$

$$\Rightarrow |\alpha - \beta| = \frac{1r}{r}$$

$$\log_{10}^{\frac{1}{r}} = \frac{\log_{10}^1}{\log_{10}^r} = \frac{\log_r^{10 \times r}}{\log_r^{r \times r}} = \frac{\log_r^{10} + 1}{\log_r^{r+1}} = \frac{\frac{10}{r} + 1}{r, r+1} = \frac{r}{r, r+1}$$

(2)

(3)

$$\log_{10}^r = \frac{\log_r^9}{\log_r^{10}} = \frac{\log_r^9 + 1}{\log_r^{10} + \log_r^r} = \frac{1,9 + 1}{1,9 \times r, 10} = \frac{r,9}{r} = \frac{1r}{r,0}$$

(5)

(4)

$$\log_r^{10} \times \log_r^r = \log_r^{10} = 1,9 \times 1,10$$

$$\log_n^m = m \quad \log_n^r = ?$$

(10)

$$\log_{r^r}^{r \times r} = \log_{r^r}^r + \log_{r^r}^{r^r} = \frac{1}{r} + \frac{r}{r} \log_r^r = m \rightarrow \frac{r}{r} \log_r^r = \frac{r(m-1)}{r} \rightarrow \log_r^r = \frac{r(m-1)}{r}$$

(7)

$$\log_{r^r}^{r \times r} = \frac{1}{r} \log_r^r + 1 \rightarrow \frac{1}{r} \times \frac{r(m-1)}{r} + 1 \rightarrow \frac{r(m-1) + r}{r} = \frac{r(m+1)}{r} = \frac{r(m+1)}{r}$$

$$(0, r)^{r-1} = \left(\frac{1r}{r}\right)^{r-1} \rightarrow \left(\frac{r}{r}\right)^{r-1} = \left(\frac{r^r}{r^r}\right)^{r-1} \rightarrow \left(\frac{r}{r}\right)^{1-r} = \left(\frac{r}{r}\right)^{r-1}$$

(1)

$$r n^r = 1 - r n \rightarrow r n^r + r n - 1 = 0 \rightarrow n = -1, n = \frac{1}{r}$$

(6)

$$\log_n^{(4n+1)} \quad \begin{cases} n=-1 \rightarrow \log_n^{(-1)} = x \\ n=\frac{1}{r} \rightarrow \log_n^r = \frac{r}{r} \end{cases}$$

$$\log_b n = \frac{r}{r} (1+a)$$

$$\log_r r = a \rightarrow r = r^a$$

(9)

$$b = r^{(1+a)} = r^{r+r^a} = r \times \boxed{r^{r^a}} = r^q$$

(5)

$$\log(r \times r^q - 1) = \log 100 = r$$

$$\frac{1}{a+b} = \log_r r \rightarrow \frac{r^a}{b} = \log_r r$$
$$\rightarrow \frac{b}{a} = r \log_r \frac{1}{r}$$

$$r^a = b+c \stackrel{+a}{\rightarrow} r = \frac{b}{a} + \frac{c}{a}$$

(10)

(5)

$$r - r \log_r \frac{1}{r} = \frac{c}{a} \rightarrow -r \log_r r = \frac{c}{a}$$

$$\left(r^{-\frac{1}{a}}\right)^{-\log_r r} = r^{\log_r \sqrt[r]{ra}}$$
$$= \sqrt[r]{ra}$$
$$= \sqrt[r]{ra}$$